AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1. (Currently Amended) A method for bleaching (3) mechanically (2) defibered pulp (14) with peroxide (29) in alkaline conditions and for washing (4) the bleached pulp (15) and recovering chemicals from the spent liquor (16) of the bleaching step by concentrating (5, 8) and combusting (6) the spent liquor and dissolving (7) the ash (31) thus formed into water (13), ~~characterized in that~~ wherein the alkaline conditions in the bleaching step (3) are obtained by adding alkali metal aluminate (12) to the pulp (14) to be bleached, which alkali metal aluminate at least to a part is said ash (28) dissolved in water.

Claim 2. (Currently Amended) The method of claim 1, ~~characterized in that~~ wherein said alkali metal aluminate is sodium aluminate.

Claim 3. Currently Amended) The method of claim 2, ~~characterized in that~~ wherein said alkaline conditions in the bleaching step (3) are partially obtained by impregnating (1) said wood chips (11) to be mechanically defibered with an aqueous solution (12, 28) of sodium aluminate and passing the pulp (14) after the mechanical defibering step (2) to said bleaching step (3).

Claim 4. (Currently Amended) The method of claim 3, ~~characterized in that~~ wherein the impregnation step (1) of said wood chips (11) to be mechanically defibered at least partially utilizes the ash (28) dissolved in water.

Claim 5. (Currently Amended) The method of ~~any of the previous claims, characterized in that~~ claim 1, wherein the bleaching step (3) is carried out at a temperature of about 20-150 °C~~, advantageously 50-100 °C~~.

Claim 6. (Currently Amended) The method of ~~any of the previous claims, characterized in that~~ claim 1, wherein the pH of said bleaching step (3) is adjusted to value of about 9.5-12.5~~, preferably 10-12~~.

Claim 7. (Currently Amended) The method of ~~any of the previous claims, characterized in that~~ claim1, wherein the concentrated (5, 8) spent liquor (21) of said bleaching step (3) is combusted (6) at a temperature of 500-1100 °C.

Claim 8. (Currently Amended) The method of ~~any of the previous claims, characterized in that~~ claim 1, wherein the spent liquor (16) received from the bleaching step (3) is concentrated (5) to a solids content of at least about 30 %~~, preferably 35-45 %~~.

Claim 9. (Currently Amended) The method of claim 8, ~~characterized in that~~ wherein the concentrated spent liquor (17) of said bleaching step (3) is further concentrated with hot flue gases (20) discharged from the combusting step (6) of said spent liquor.

Claim 10. (New) The method of claim 2, wherein the bleaching step (3) is carried out at a temperature of about 20-150 °C.

Claim 11. (New) The method of claim 3, wherein the bleaching step (3) is carried out at a temperature of about 20-150 °C.

Claim 12. (New) The method of claim 1, wherein the bleaching step (3) is carried out at a temperature of about 50-100 °C.

Claim 13. (New) The method of claim 2, wherein the bleaching step (3) is carried out at a temperature of about 50-100 °C.

Claim 14. (New) The method of claim 2, wherein the pH of said bleaching step (3) is adjusted to value of about 9.5-12.5.

Claim 15. (New) The method of claim 3, wherein the pH of said bleaching step (3) is adjusted to value of about 9.5-12.5.

Claim 16. (New) The method of claim 1, wherein the pH of said bleaching step (3) is adjusted to a value of about 10-12.

Claim 17. (New) The method of claim 2, wherein the pH of said bleaching step (3) is adjusted to a value of about 10-12.

Claim 18. (New) The method of claim 2, wherein the concentrated (5, 8) spent liquor (21) of said bleaching step (3) is combusted (6) at a temperature of 500-1100 °C.

Claim 19. (New) The method of claim 1, wherein the spent liquor (16) received from the bleaching step (3) is concentrated (5) to a solids content of about 35-45%.

Claim 20. (New) The method of claim 2, wherein the spent liquor (16) received from the bleaching step (3) is concentrated (5) to a solids content of about 35-45%.